CURRICULUM VITAE

NAME: Li Li

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RESEARCH INTERESTS

Mechanisms and regulation of phytonutrient and micronutrient metabolism. Plant biotechnology. Current research focuses primarily on carotenoid and flavonoid biosynthesis as well as selenium and glucosinolate metabolism in *Brassica* and staple crops.

HIGHER EDUCATION

Plant Biochemistry and Physiology, Reading University, U. K.; Ph.D.
Horticulture, Sichuan Agricultural University, P. R. China; B.S.

PROFESSIONAL EXPERIENCE

2009-present	Adjunct Associate Professor, Department of Plant Breeding and Genetics, Cornell University
2003-2009	Adjunct Assistant Professor, Department of Plant Breeding and Genetics, Cornell University
2002-present	Research Molecular Biologist (Plant), USDA-ARS, Plant, Soil and Nutrition Laboratory, Cornell University, Ithaca, NY
1995-2002	Research Associate IV, Department of Plant Biology, Department of Breeding and Genetics, Cornell University
1993-1995	Postdoctoral Associate, Department of Biochemistry, University of Missouri-Columbia
1988-1992	Postdoctoral Associate, Department of Biochemistry, MSU-DOE Plant Research Laboratory, Michigan State University
1984-1988	Graduate Assistant, Department of Botany, Reading University, U. K.

TEACHING EXPERIENCE

Co-Instructor for Nutritional Quality Improvement of Food Crops (PLBR 4070)
Guest Lecturer for several courses

PUBLICATIONS

Li L, Yang Y, Xu Q, Owsiang K, Welsch R, Chitchumroonchokchai C, Lu S, Van Eck J, Deng X, Failla M, Thannhauser TW (2011) The *Or* gene enhances carotenoid

accumulation and stability during post-harvest storage of potato tubers. *Molecular Plant* (In press)

Brown A, Paterson AH, **Li L** (2011) Genomics and breeding in food crops. In *OMICS Technologies: Tools for Food Sciences* (Edited by N. Benkenblla). Taylor & Francis Group, CRC Press (In press)

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Yang Y, Xu Q, Owsiany K, Zhang S, Thannhauser TW, **Li L** (2011) Evaluation of different multidimensional LC-MS/MS pipelines for iTRAQ-based proteomic analysis of potato tubers in response to cold storage. *Journal of Proteome Research* 10: 4647-4660

Zhou X, McQuinn R, Fei Z, Wolters AM, Van Eck J, Brown C, Giovannoni JJ, **Li L** (2011) Regulatory control of high levels of carotenoid accumulation in potato tubers. *Plant, Cell & Environment* 34:1020-1030

Ramos SJ, Yuan Y, Faquin V, Guilherme LRG, **Li L** (2011) Evaluation of genotypic variation of broccoli (*Brassica oleracea* var. *italic*) in response to selenium treatment. *Journal of Agriculture and Food Chemistry* 59:3657-3665

Ramos SJ, Rutzke MA, Hayes RJ, Faquin V, Guilherme LRG, **Li L** (2011) Selenium accumulation in lettuce germplasm. *Planta* 233:649-660

Zhou X, Sun TH, Wang N, Ling HQ, Lu S, **Li L** (2011) The cauliflower *Orange* gene enhances petiole elongation by suppressing expression of e*ukaryotic release factor 1*. *New Phytologist* 190: 89-100

Chiu LW, Zhou X, Burke S, Wu X, Prior RL, and **Li L** (2010) The purple cauliflower arises from activation of a MYB transcription factor. *Plant Physiology* 154: 1470-1480

Zhou X, Cooke P, **Li L** (2010) Eukaryotic release factor 1-2 affects *Arabidopsis* responses to glucose and phytohormones during germination and early seedling development. *Journal of Experimental Botany* 61:357-367

Zhou X, **Li L** (2010) Think outside the box: Selenium volatilization altered by a broccoli gene in the ubiquinone biosynthetic pathway. *Plant Signaling & Behavior* 5:74-75

Van Eck J, Zhou X, Lu S, **Li L** (2010) Modulation of carotenoid accumulation in transgenic potato by inducing chromoplast formation with enhanced sink strength. *Methods in Molecular Biology* 643: 77-93

Yuan Y, Chiu LW, **Li L** (2009) Transcriptional regulation of anthocyanin biosynthesis in red cabbage. *Planta* 230:1141-1153

Zhou X, Yuan Y, Yang Y, Rutzke M, Thannhauser TW, Kochian LV, **Li L** (2009) Involvement of a broccoli COQ5 methyltransferase in the production of volatile selenium compounds. *Plant Physiology* 151:528-540.

Salas-Fernandez MG, Hamblin M, **Li L**, Rooney WL, Tuinstra MR, Kresovich S (2008) Quantitative trait loci analysis of endosperm color and carotenoid content in sorghum grain. *Crop Science* 48:1732-1743.

Lu S, **Li L** (2008) Carotenoid metabolism: the biosynthesis, regulation, and beyond. *Journal of Integrative Plant Biology* 50:778-785.

Zhou X, Van Eck J, **Li L** (2008) Use of the cauliflower *Or* gene to improve crop nutritional quality. *Biotechnology Annual Review*, Volume 14. p171-190.

Lopez AB, Yang Y, Thannhauser TW, **Li L** (2008) Phytoene desaturase is present in a large protein complex in plastid membrane. *Physiologia Plantarum* 133:190-198.

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Lopez, AB, Van Eck J, Conlin BJ, Paolillo DJ, O'Neill J, **Li L** (2008) Effect of the cauliflower *Or* transgene on carotenoid accumulation and chromoplast formation in transgenic potato tubers. *Journal of Experimental Botany* 59:213-223.

Li L, Van Eck J (2007) Perspectives: metabolic engineering of carotenoid accumulation by creating a metabolic sink. *Transgenic Research* 16:581-585.

Yang Y, Thannhauser TW, **Li L**, Zhang S (2007) Development of an integrated approach for evaluation of 2-D gel image analysis: impact of multiple proteins in single spots on comparative proteomics in conventional 2-D gel/MALDI workflow. *Electrophoresis* 28:2080-2094.

Lyi SM, Zhou X, Kochian LV, and **Li L** (2007) Biochemical and molecular characterization of the homocysteine *S*-methyltransferase from broccoli (*Brassica oleracea var. italica*). *Phytochemistry* 68: 1112-1119

Li L, Van Eck J (2006) Use of the *Or* gene to improve carotenoid content in staple crops. Patent Docket No. 0186.03, Serial No. 11/296,025

Lu S, Van Eck J, Zhou X, Lopex AB, O'Halloran DM, Cosman KM, Conlin B, Paolillo DJ, Garvin DF, Vrebalov J, Kochian L, V, Kupper H, Earle ED, Cao J, and **Li L** (2006) The cauliflower *Or* gene encodes a DnaJ cysteine-rich domain-containing protein that mediates high-levels of β-carotene accumulation. *The Plant Cell* 18: 3594-3605. (Research Highlights in *Nature Biotechnology* (2007) 25:195 Golden Cauliflower)

Li L, Lu S, Cosman KM, Earle ED, Garvin DF, and O'Neill J (2006) β-carotene accumulation induced by the cauliflower *Or* gene is not due to an increased capacity of biosynthesis. *Phytochemistry* 67: 1177-1184.

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Lyi SM, Heller LI, Rutzke M, Welch RM, Kochian LV, **Li L** (2005) Molecular and biochemical characterization of the selenocysteine *Se*-methyltransferase gene and *Se*-methylselenocysteine synthesis in broccoli. *Plant Physiology* 138:409-420
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Magalhaes JV, Garvin DF, Wang Y, Sorrells ME, Klein PE, Schaffert RE, **Li L**, Kochian LV (2004) Comparative mapping of a major aluminum tolerance gene in sorghum and other species in the Poaceae. *Genetics* 167:1905-1914

Li L, Lu S, O'Halloran DM, Garvin DF, Vrebalov J (2003) High-resolution genetic and physical mapping of the cauliflower high-beta-carotene gene *Or* (*Orange*). *Molecular Genetics and Genomics* 270:132-138

Li L, Thipyapong P, Breeden DC, Steffens JC (2003) Overexpression of a bacterial branched-chain alpha-keto acid dehydrogenase complex in *Arabidopsis* results in accumulation of branched-chain acyl-CoAs and alteration of free amino acid composition in seeds. *Plant Science*165:1213-1219

Li L, Garvin DF (2003) Molecular mapping of *Or,* a gene inducing β-carotene accumulation in cauliflower (*Brassica oleracea* var. *botrytis*). *Genome* 46:588-594

Li L, Steffens JC (2002) Overexpression of polyphenol oxidase in transgenic tomato plants results in enhanced bacterial disease resistance. *Planta* 215:239-247

Li L, Paolillo DJ, Parthasarathy MV, DiMuzio EM, Garvin DF (2001) A novel gene mutation that confers abnormal patterns of β-carotene accumulation in cauliflower (*Brassica oleracea var. botrytis*). *The Plant Journal* 26:59-67

Xu YL, **Li L**, Gage DA, Zeevaart JA (1999) Feedback regulation of GA5 expression and metabolic engineering of gibberellin levels in *Arabidopsis*. *The Plant Cell* 11:927-935

Wu K, **Li L**, Gage DA, Zeevaart JAD (1996) Molecular cloning and photoperiod-regulated expression of gibberellin 20-oxidase from the long-day plant spinach. *Plant Physiology* 110:547-554

Li L, Li BL, Hock M, Wang E, Folk WR (1995) Sequences flanking the pentanucleotide T-antigen binding sites in the polyomavirus core origin help determine selectivity of DNA replication. *Journal of Virology* 69:7570-7578

Xu YL, **Li L**, Wu K, Peeters AJM, Gage DA, Zeevaart JAD (1995) The *GA5* locus of *Arabidopsis thaliana* encodes a multifunctional gibberellin 20-oxidase: Molecular cloning and functional expression. *Proceedings of the National Academy of Sciences of the United States of America* 92:6640-6644

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Li L, Ross JD (1990) Lipid mobilization during dormancy breakage in oilseed of *Corylus-avellana* L. *Annals of Botany* 66:501-506

Li L, Ross JD (1988) Fructose 1 6-bisphosphatase in seeds of *Corylus-avellana* L. *Phytochemistry* 27:1977-1980